

## Predation by a Rockfish, *Sebastes chrysomelas*, on *Lamellaria diegoensis* Dall, 1885

BY

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THE LAMELLARIDAE REPRESENT a family of marine mesogastropods that apparently rely upon cryptic adaptations (GHISELIN, 1964; THOMPSON, 1973) and defensive acid secretions (THOMPSON, 1960; 1969) to avoid detection and falling prey to a variety of predatory fish and invertebrates. These gastropods can mimic their own prey organism, compound ascidians, as well as other invertebrates not commonly taken by predators, e. g., barnacles (GHISELIN, *op. cit.*; THOMPSON, 1973). These adaptations, as well as the production of strong defensive acidic fluids (approximate pH = 1) have been thought to preclude predation of these gastropods by fishes, which THOMPSON (*op. cit.*) states "... are known to detest food which tastes acidic ..."

On August 15, 1977 a female specimen of *Sebastes chrysomelas* (Jordan & Gilbert), measuring 245 mm, was collected during a food habits study in the vicinity of Diablo Canyon, San Luis Obispo County, California (120°51'23"W; 35°12'44"N). In the stomach contents of this individual was a single specimen of *Lamellaria diegoensis* Dall, 1885, the only prey item present. Past experience with 80 specimens of *S. chrysomelas* collected during the present study, as well as observations by LARSON (1972), had shown an apparent preference by this rockfish for *Octopus* spp. and small decapod crustaceans.

The occurrence of *Lamellaria diegoensis* thus represents a unique food item never before documented. This raises several questions as to the location of the lamellarid when it was taken, and the feeding behavior of the fish:

1. Was the lamellarid residing on a tunicate when attacked by the fish? 2. If the lamellarid was mimicking an ascidian, how was it detected by the fish? 3. Why would the fish feed on a prey so foreign to its usual diet, especially one that is capable of secreting strongly acidic fluids?

Field observations indicate that *Lamellaria diegoensis* was observed most commonly on substrates other than compound ascidians (David Behrens, Diablo Canyon Research Laboratory, personal communication). In these instances the lamellarid failed to mimic the substrate and was clearly visible. These observations could explain how the lamellarid was observed by the fish; however, the question of why the fish fed on the lamellarid, which can secrete strong acidic fluids, still remains. Continuing laboratory and field observations may provide the answer.

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